

WHAT IS CLAIMED IS:

1. A contents transmission/reception system, comprising:
 - 5 a transmission device; and at least one reception device that receives contents from the transmission device; wherein the transmission device has:
 - 10 an authentication and key exchange processing unit configured to carry out an authentication and key exchange processing with a reception device that made a contents transmission request;
 - 15 a device identification information transmission request unit configured to transmit a device identification information request to the reception device, such that the reception device transmits a device identification information;
 - 20 a device identification information registration unit configured to register the device identification information transmitted from the reception device;
 - 25 a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the reception device, from a network to which the reception device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

5 a distribution condition determination unit configured to change a distribution condition for contents to be transmitted to the reception device that 10 made the contents transmission request, according to a judgement result obtained by the comparison judgement unit; and

the reception device has:

a contents transmission request unit configured 15 to make the contents transmission request to the transmission device; and

a device identification information transmission unit configured to transmit the device identification information of the reception device to 20 the transmission device, upon receiving the device identification information request from the transmission device.

2. The contents transmission/reception system of 25 claim 1, wherein the device identification information is a MAC address of a network interface, and the device

identification information search unit transmits a MAC address search request by using an IP address of the reception device as a key to a network segment to which the reception device is connected, and receives a MAC address search result.

3. The contents transmission/reception system of claim 2, wherein the device identification information search unit searches out the MAC address corresponding 10 to the IP address of the reception device by an ARP (Address Resolution Protocol).

4. The contents transmission/reception system of claim 2, wherein the device identification information 15 transmission unit transmits the MAC address to the transmission device by attaching an electronic signature.

5. The contents transmission/reception system of 20 claim 4, further comprising a verification unit configured to verify whether the MAC address is altered or not, when the electronic signature is attached to the MAC address;

wherein the device identification information 25 registration unit registers the MAC address only when the verification unit judges that the MAC address is

not altered.

6. The contents transmission/reception system of
claim 1, wherein the authentication and key exchange
5 processing unit carries out the authentication and key
exchange processing according to a DTCP (Digital
Transmission Contents Protection).

7. The contents transmission/reception system of
10 claim 1, wherein the reception device also has:

a reception device side authentication and key
exchange processing unit configured to carry out the
authentication and key exchange processing, with the
transmission device;

15 a network interface unit configured to receive
encrypted contents from the transmission device; and
an encryption processing unit configured to
decrypt the encrypted contents received by the network
interface unit, by using a key exchanged by the
20 reception device side authentication and key exchange
processing unit.

8. A contents transmission device for transmitting
contents to at least one reception device, the contents
25 transmission device comprising:

an authentication and key exchange processing unit

configured to carry out an authentication and key exchange processing with a reception device that made a contents transmission request;

5 a device identification information transmission request unit configured to transmit a device identification information request to the reception device, such that the reception device transmits a device identification information;

10 a device identification information registration unit configured to register the device identification information transmitted from the reception device;

15 a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the reception device, from a network to which the reception device is connected;

20 a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

25 a distribution condition determination unit configured to change a distribution condition for contents to be transmitted to the reception device that made the contents transmission request, according to a

judgement result obtained by the comparison judgement unit.

9. A contents transmission/reception system.

5 comprising:

a transmission device; and

at least one reception device that receives contents from the transmission device;

wherein a reception device has:

10 a contents transmission request unit configured to make a contents transmission request to the transmission device;

15 a first authentication and key exchange processing unit configured to carry out an authentication and key exchange processing with the transmission device to which the contents transmission request is made;

20 a device identification information transmission request unit configured to transmit a device identification information request to the transmission device, such that the transmission device transmits a device identification information;

25 a device identification information registration unit configured to register the device identification information transmitted from the transmission device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to
5 which the transmission device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and
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a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device
15 to which the contents transmission request is made, according to a judgement result obtained by the comparison judgement unit; and

the transmission device has:

a device identification information transmission unit configured to transmit the device identification information of the transmission device to the reception device, upon receiving the device identification information request from the reception device;
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25 a second authentication and key exchange processing unit configured to carry out an

authentication and key exchange processing with the reception device that made the contents transmission request; and

5 a contents transmission control unit configured to carry out contents transmission control according to the reception condition determined by the reception condition determination unit.

10. A contents reception device for receiving contents 10 from a transmission device, the contents reception device comprising:

a contents transmission request unit configured to make a contents transmission request to the transmission device;

15 an authentication and key exchange processing unit configured to carry out an authentication and key exchange processing with the transmission device to which the contents transmission request is made;

a device identification information transmission 20 request unit configured to transmit a device identification information request to the transmission device, such that the transmission device transmits a device identification information;

a device identification information registration 25 unit configured to register the device identification information transmitted from the transmission device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to which the transmission device is connected;

5 a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

10 a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device to which the contents transmission request is made.

15 according to a judgement result obtained by the comparison judgement unit.

11. A contents transmission/reception system.

20 comprising:

a transmission device; and

at least one reception device that receives contents from the transmission device;

wherein the transmission device has:

25 a device identification information transmission request unit configured to transmit a

device identification information request to a reception device that made a contents transmission request, such that the reception device transmits a device identification information;

5 a device identification information registration unit configured to register the device identification information transmitted from the reception device;

an advance notice unit configured to make a 10 device identification information search advance notice, to the reception device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) 15 address of the reception device, from a network to which the reception device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search 20 unit and the device identification information registered by the device identification information registration unit coincide or not;

a request response reception judgement unit configured to judge whether a response to the device 25 identification information search advance notice is received or not; and

a distribution condition determination unit configured to determine a distribution condition for contents to be transmitted to the reception device that made the contents transmission request, according to 5 judgement results obtained by the comparison judgement unit and the request response reception judgement unit; and

the reception device has:

a device information transmission unit
10 configured to transmit the device identification information of the reception device and a device identification information search advance notice response to the transmission device, upon receiving the device identification information request from the 15 transmission device.

12. The contents transmission/reception system of claim 11, wherein the reception device also has:

a device identification information search 20 judgement unit configured to judge whether the device identification information search request from the transmission device is received or not; and
a contents reception control unit configured to prohibit reception of contents from the transmission 25 device when the device identification information search judgement unit judges that the device

identification information search request is not received.

13. A contents transmission device for transmitting 5 contents to at least one reception device, the contents transmission device comprising:

a device identification information transmission request unit configured to transmit a device identification information request to a reception 10 device that made a contents transmission request, such that the reception device transmits a device identification information:

a device identification information registration unit configured to register the device identification 15 information transmitted from the reception device;

an advance notice unit configured to make a device identification information search advance notice, to the reception device;

a device identification information search unit 20 configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the reception device, from a network to which the reception device is connected;

a comparison judgement unit configured to judge 25 whether the device identification information searched out by the device identification information search

unit and the device identification information registered by the device identification information registration unit coincide or not;

5 a request response reception judgement unit configured to judge whether a response to the device identification information search advance notice is received or not; and

10 a distribution condition determination unit configured to determine a distribution condition for contents to be transmitted to the reception device that made the contents transmission request, according to judgement results obtained by the comparison judgement unit and the request response reception judgement unit.

15 14. A contents transmission/reception system, comprising:

a transmission device; and
at least one reception device that receives contents from the transmission device;

20 wherein the transmission device has:

a device identification information search judgement unit configured to judge whether a device identification information search request from a reception device is received or not; and

25 a contents transmission control unit configured to prohibit transmission of contents to the reception

device when the device identification information search judgement unit judges that the device identification information search request is not received; and

5 the reception device has:

a contents transmission request unit configured to make a contents transmission request to the transmission device;

an authentication and key exchange processing unit configured to carry out an authentication and key exchange processing with the transmission device to which the contents transmission request is made;

a device identification information transmission request unit configured to transmit the 15 device identification information request to the transmission device, such that the transmission device transmits a device identification information;

a device identification information registration unit configured to register the device 20 identification information transmitted from the reception device;

an advance notice unit configured to make a device identification information search advance notice, to the transmission device;

25 a device identification information search unit configured to search out the device identification

information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to which the transmission device is connected;

a comparison judgement unit configured to judge

5 whether the device identification information searched out by the device identification information search unit and the device identification information registered by the device identification information registration unit coincide or not; and

10 a reception condition determination unit configured to determine a reception condition for contents to be transmitted from the transmission device to which the contents transmission request is made, according to a judgement result obtained by the

15 comparison judgement unit.

15. A contents reception device for receiving contents from a transmission device, the contents reception device comprising:

20 a contents transmission request unit configured to
make a contents transmission request to the
transmission device;
an authentication and key exchange processing unit
configured to carry out an authentication and key
25 exchange processing with the transmission device to
which the contents transmission request is made;

a device identification information transmission request unit configured to transmit a device identification information request to the transmission device, such that the transmission device transmits a
5 device identification information;

a device identification information registration unit configured to register the device identification information transmitted from the reception device;

an advance notice unit configured to make a device
10 identification information search advance notice, to the transmission device;

a device identification information search unit configured to search out the device identification information corresponding to an IP (Internet Protocol) address of the transmission device, from a network to
15 which the transmission device is connected;

a comparison judgement unit configured to judge whether the device identification information searched out by the device identification information search
20 unit and the device identification information.

registered by the device identification information registration unit coincide or not; and

a reception condition determination unit configured to determine a reception condition for
25 contents to be transmitted from the transmission device to which the contents transmission request is made,

according to a judgement result obtained by the
comparison judgement unit.

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